

Accepted Manuscript

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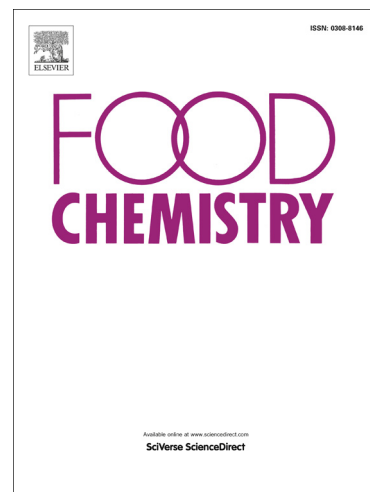
PII: S0308-8146(14)00714-6
DOI: <http://dx.doi.org/10.1016/j.foodchem.2014.05.011>
Reference: FOCH 15792

To appear in: *Food Chemistry*

Received Date: 22 July 2013
Revised Date: 21 March 2014
Accepted Date: 6 May 2014

Please cite this article as: Capuano, E., van der Veer, G., Boerrigter-Eenling, R., Elgersma, A., Rademaker, J., Sterian, A., van Ruth, S., Verification of fresh grass feeding, pasture grazing and organic farming by cows farm milk fatty acid profile, *Food Chemistry* (2014), doi: <http://dx.doi.org/10.1016/j.foodchem.2014.05.011>

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Verification of fresh grass feeding, pasture grazing and organic farming by cows farm milk fatty acid profile

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ABSTRACT

The present study investigated the use of fatty acid (FA) profiling in combination with chemometric modelling to verify claims for cow milk in terms of fresh grass feeding, pasture grazing and organic/biodynamic farming. The FA profile was determined for 113 tank milk samples collected in The Netherlands from 30 farms over four different months, and used to develop classification models based on the PLS-DA algorithm. Milk from cows with daily rations of fresh grass could be successfully distinguished from milk from cows with no fresh grass in their diet. Milk from cows at pasture could easily be distinguished from milk from stabled cows without fresh grass in the diet, but the correct prediction of milk from stabled cows fed fresh grass indoors proved difficult. The FA profile of organic/biodynamic milk was

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